

Supporting Information

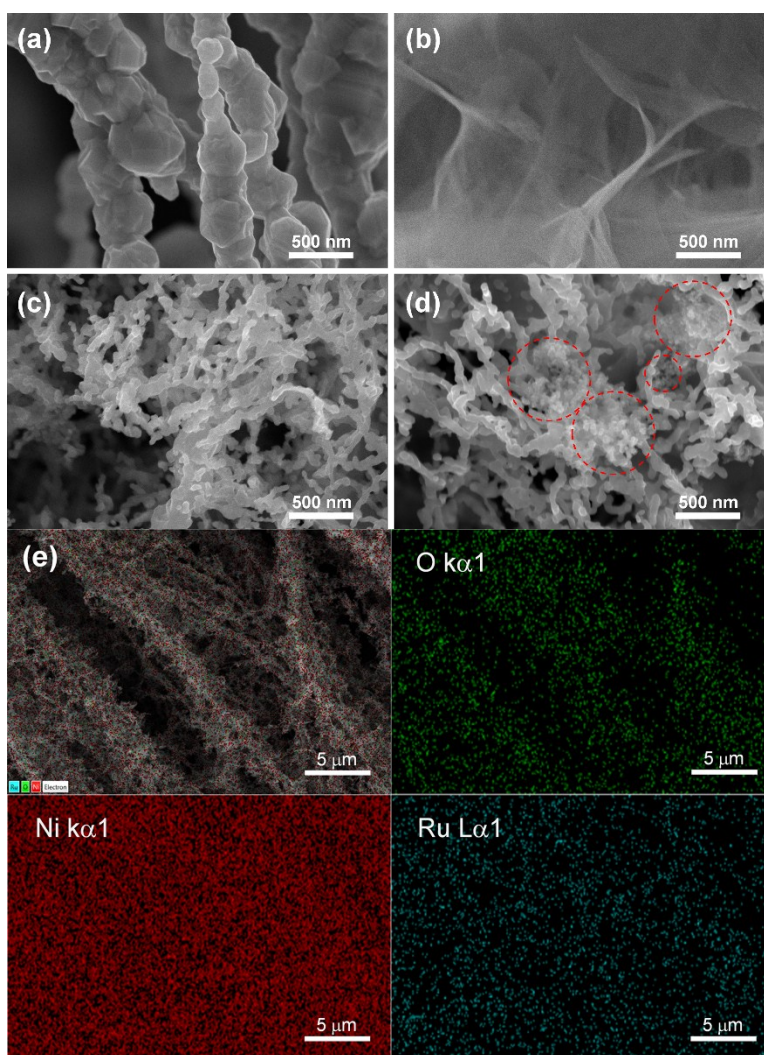


Fig. S1 High resolution SEM images of (a) Ni nanowires, (b) Ni oxalate nanowires, (c) Ni nanofoam, and (d) RuO₂/Ni NF, where the red circles indicate RuO₂ deposition. (e) EDX mapping of RuO₂/Ni NF.

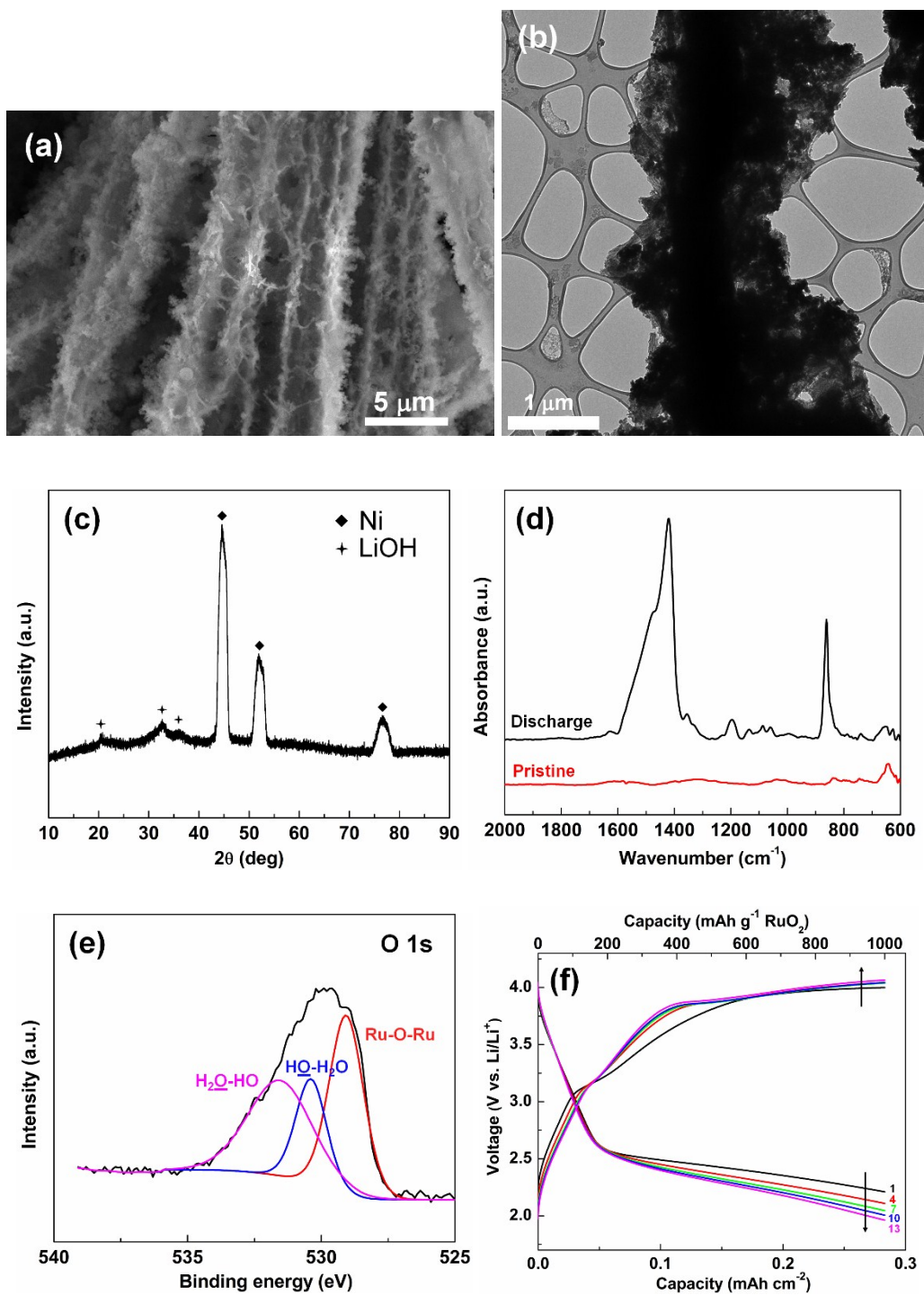


Fig. S2 (a) SEM and (b) TEM image and (c) XRD pattern of fully discharged RuO_2/Ni NF electrode. (d) ATR-FTIR measurement of pristine and discharged RuO_2/Ni NF electrode. (e) XPS spectra of O 1s of RuO_2 nanoflakes demonstrate the hyrous nature with OH and H_2O hydrogen

bonded to each other.^[1] (f) Charge-discharge curves in 13 cycles of RuO₂/Ni NF at 0.1 mA cm⁻² with capacity limit 0.28 mAh cm⁻² (1000 mAh g⁻¹ RuO₂) after 3 full CV cycles of 2.0-4.0 V at 0.1 mV s⁻¹. The arrows indicate gradual decrease and increase of the discharge and charge potentials, respectively.

References

[1] C. Liu, C. Li, K. Ahmed, W. Wang, I. Lee, F. Zaera, C. S. Ozkan and M. Ozkan, *Adv. Mater. Interfaces*, 2016, 3, 1500503.